

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-10 are unchanged, new claims 11-12 are added, and claims 1-12 are pending in the application.

The specification has been amended as suggested by the Examiner; hence, it is believed the specification is in proper form.

Claims 1-10 stand rejected under 35 USC §102(b) in view of U.S. Patent Publication No. 2002/0065047 by Moose (with further reliance on U.S. Patent No. 7,010,559 to Rawlins and U.S. Patent Publication No. 2004/0228424 by Baldwin et al. to establish inherency, described below). This rejection is respectfully traversed, as the rejection fails to demonstrate that the applied reference discloses each and every limitation *in the manner claimed*.

Each of the independent claims 1 and 10 specify “**determining** first and second DC offset components based on filtering prescribed subcarrier components from a prescribed preamble portion of each of the first and second components, respectively”, and “outputting corrected first and second components of the wireless signal, for recovery of the data, based on **removing** the first and second DC offset components from the first and second components, respectively.”

Moose provides no disclosure or suggestion whatsoever of **determining** first and second DC offset components, let alone **removing** the first and second DC offset components from the first and second components, respectively. The rejection states that Fig. 4 and para. 26-32 of Moose disclose “determining first and second DC offset components”; however, Moose fails to provide any reference to the claimed term “DC offset”.

Moose describes “frequency offset” (e.g., para. 9, 11, 19, 22, 27, 32, 35, etc.), “timing offset” (e.g., para. 65), “long sync sequence offset” (e.g., para. 68), “the offset set of sub-carriers” (e.g., para. 69), and “phase offset” (e.g., para. 91-92), but does not provide any reference to the claimed “DC offset”.

In fact, the portions cited by the Examiner (Fig. 4 and para. 26-32) are described in precise mathematical detail at para. 45-58. In summary, Fig. 4 is described as illustrating the detection and frequency/timing recovery process based on “[computing] the correlation between

the incoming signal samples [Fig. 4D] and the same samples with a delay of N sample points [Fig. 4C].” (Para. 54, lines 2-4). The integration window of the correlator consists of two intervals, illustrated in Fig. 4B as “n to “n-95” and “n-160 to n-255” (see, e.g., para. 29, 54). The cross-correlation value “r12” is expressed within the integrator 405 of Fig. 4a: the cross-correlation value “r12” reaches a local maximum at sample point “ $2.5N-1 = 159$ ” (see equation (8) and para. 54-55), a global maximum at “ $5N-1=319$ ” (see equation (9) and para. 55-56), and another local maximum at sample point “ $7.5N-1=479$ ” (see equation (10) and para. 57-58), resulting in a “correlator output [following] a triangular function with a base of 192 sample points (see Fig. 5)” (para. 58, lines 4).

Hence, a threshold is set “halfway between the local maxima and the global maximum” in order to provide detection of an incoming packet and an initial estimate for *symbol timing* (para. 58).

Hence, paragraphs 45-58 explicitly refute the assertion in the rejection that the cross-correlator of Fig. 4 performs any determination or removal of DC offset; rather, the cross-correlator of Fig. 4 is strictly to determine the initial timing of a detected packet.¹

Further, the Examiner’s reliance on inherency is strictly limited to demonstrating “the filtering to produce the correlation” (see, e.g., page 3, lines 16-17 of Office Action), *i.e.*, to equate the terms “correlation” and “filtering”; at best, the cited portions simply identify Finite Impulse Response (FIR) filters. The rejection, however, does not rely on inherency to establish

¹ See also para. 27, lines 4-8 (“a digital cross-correlator 401, as shown in Fig. 4A, detects an incoming packet on input 407. The correlator is designed to utilize the ***maximum available coherent energy in the preamble for detection*** and to generate a sharp peak for an initial symbol-timing estimate.”); para. 29, lines 10-13 (“When the last sample value of the long sync symbols at sample point 320, or the last point of the preamble sequence, enters the correlator’s direct path, the correlation reaches a peak value.”); para. 31, lines 1-6 (“The expected value of the magnitude of the correlator output is shown in FIG. 5. The correlator has a processing gain of 192 (22.8 dB), the greatest that can be achieved under the WLAN standard. A peak detector can recognize the peak, and the peak’s location provides an initial estimate of symbol timing.”).

the essential claimed feature of “determining first and second DC offset components” or “removing the first and second DC offset components”, as claimed.²

Hence, the §102 rejection is per se legally deficient because it fails to demonstrate that the applied reference, expressly *or inherently*, discloses each and every claim limitation in the manner claimed in independent claims 1 and 6.³

In view of the above, it is believed this application is in condition for allowance, and such a Notice is respectfully solicited.

²Even if inherency was relied on to establish filtering of DC offsets, the cited portions of Rawlins or Baldwin et al. do not demonstrate that an FIR filter necessarily performs DC offset detection and removal, as claimed. See MPEP 2112 (“The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); ... ‘The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” (quoting *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999))). When the Examiner alleges that a certain result is inherent in the operation of a reference, it must appear that this is necessarily so without any doubt. *Ex parte Ruskin*, 95USPQ 96 (Pat. Ofc. Bd. App. 1951).

³As specified in MPEP §2131: “‘A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference’ *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... ‘The identical invention must be shown in as complete detail as is contained in the ... claim.’” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).” MPEP 2131 (Rev. 3, Aug. 2005, at p. 2100-76).

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-536, and please credit any excess fees to such deposit account.

Respectfully submitted,

Manelli Denison & Selter, PLLC

A handwritten signature in black ink, appearing to read 'L R Turkevich', with a stylized flourish at the end.

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